DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB52

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Scirpus ancistrochaetus (Northeastern Bulrush)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine Scirpus ancistrochaetus (Northeastern bulrush), a perennial herb of the sedge family (Cyperaceae) to be an endangered species pursuant to the Endangered Species Act of 1973 (Act), as amended. Twelve occurrences of Scirpus ancistrochaetus are found in open shallow ponds, wet depressions, and marshes in Virginia, West Virginia, Maryland, Pennsylvania, Massachusetts, and Vermont; the species is also known historically from New York. Eight of the twelve extant populations are extremely small, each having less than 70 flowering culms. The species is threatened by habitat loss and modification through residential, agricultural and recreational development. This proposal, if made final, would extend the Federal protection and recovery provisions afforded by the Act to Scirpus

ancistrochaetus. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by January 7, 1991. Public hearing requests must be received by December 24, 1990.

ADDRESSES: Comments and materials, and requests for public hearing concerning this proposal should be sent to the New England Field Office, U.S. Fish and Wildlife Service, 22 Bridge St., Concord, New Hampshire 03301. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Susanna L. von Oettingen at the above address (telephone: 603/225-1411 or FTS 834-4411.

SUPPLEMENTARY INFORMATION:

Background

Scirpus ancistrochaetus (Northeastern bulrush), a perennial member of the sedge family (Cyperaceae), was described as a new species by A.E. Schuyler in 1962. Though Scirpus ancistrochaetus is closely related to Scirpus atrovirens and Scirpus hattorianus, Kartesz and Kartesz (1980) also acknowledged S. ancistrochaetus as a distinct species. The Northeastern bulrush is a tall, leafy plant, generally 80 to 120 cm (30 to 47 inches) in height. Flowering culms (stems) are produced from short, woody, underground rhizomes. The lower leaves are 40 to 60 times as long as wide; the uppermost leaves are 30 to 50 times as long as wide (Schuyler 1962). A distinctive field characteristic which aids in separating this species from other bulrushes is the arching rays of the inflorescence. The flowers have six, small rigid perianth bristles each covered to the base with thick-walled, sharply pointed barbs projecting downward. The yellow brown achenes (fruits) are mostly ovate, and thickened and tough at the top. S. ancistrochaetus flowers from mid-June to July, and sets fruit between July and September (Crow 1982).

The reproductive mechanism of S. ancistrochaetus is not clearly understood. It appears that S. ancistrochaetus most often reproduces vegetatively as new plants develop from the nodes and culms of recumbent stems. The absence of isolated individuals suggests that sexual recruitment is not occurring (Bartgis, The Maryland Natural Heritage Program, pers. comm., 1990).

Schuyler (1964, 1967) investigated the relationship between *Scirpus*

ancistrochaetus and two closely related species, S. atrovirens and S. hattorianus and observed that S. ancistrochaetus will hybridizze with both species, generally producing a sterile hybrid. When in its vegetative form, S. atrovirens is very similar in appearance to S. ancistrochaetus, while hybrids between these two species are morphologically intermediate, both in vegetative and reproductive forms. The ancestral relationship of Scirpus ancistrochaetus to S. atrovirens. as well as its scarcity and scattered occurrence in isolated wetlands in areas where the flora has been well researched, suggests that S. ancistrochaetus is a relict species (A. Schuyler, Academy of Natural Sciences of Philadelphia, pers. comm., 1990).

The Northeastern bulrush is found at the unshaded water's edge of acidic to circumneutral natural ponds, wet depressions or shallow sinkholes. The ponds are often clustered and separated by a few hundred feet or yards. S. ancistrochaetus may be found in one or more ponds within a wetland complex, though rarely, if ever, occurring in all of the ponds. These wetlands, generally less than one acre in size, appear to occur primarily in low-lying areas in hilly country (Schuyler 1962) and have seasonally variable water levels, ranging from inundation to desiccation (Rawinski 1990). The ponds and depressions where S. ancistrochaetus may be found are considered unusual habitats, especially in the southern portion of its range. Though the habitat does not appear to have distinctive characteristics, many statewide rare plants such as Potamageton pulcher. Scirpus torreyi, and Glyceria acutiflora are often found in association with S. ancistrochaetus, indicating that there may be subtle, and as yet unknown properties of the habitat (Rawinski, The Nature Conservancy, pers. comm., 1990). Other members of the genus Scirpus found with S. ancistrochaetus are S. atrovirens, S. cyperinus, S. pedicellaris, S. hattorianus and S. atrocinctus.

Schuyler (1962) first discovered S. ancistrochaetus in Rockingham, Windham County, Vermont, which is considered the type locality. Emergence of the plant at a location may be unpredictable from year to year. Nontheless, historical records of leafy Scirpus species are useful in indicating whether S. ancistrochaetus is more common than believed. In Schuyler's (1963, 1967) extensive review of Scirpus herbaria specimens, few misidentified S. ancistrochaetus were documented and only five historical occurrences were identified. In 1986 and 1989 the Fish and

Wildlife Service (Service) contracted with The Nature Conservancy's Eastern Regional Office to conduct status surveys for Scirpus ancistrochaetus (Rawinski 1986, 1990). All extant and historic sites, and a majority of the sites identified as potential habitat were surveyed in Virginia, West Virginia, Maryland, Pennsylvania, New York, Massachusetts, and Vermont. At present, there are 12 extant occurrences and nine historical occurrences, four of which were confirmed to have been destroyed or failed.

Approximately half of the suitable habitat in Virginia has been surveyed; of the twenty-one ponds identified as potential habitat and surveyed for S. ancistrochaetus in 1989, only one was found to be a new occurrence. There are now four extant occurrences found in Rockingham, Bath, Alleghany and Augusta Counties. One of the occurrences has less than 25 plants. The plants are found in shallow, oligotrophic sinkholes overlying sandstone in the Blue Ridge Mountains. A number of rare and unusual species occur in association with S. ancistrochaetus on the Virginia sites, including Helenium virginicum, a Category 1 Federal candidate species (a candidate for which the Service has sufficient information to support a proposal to list), and Glyceria acutiflora and G. septentrionalis, two species diagnostic of this habitat type (Rawinski 1990). Three of the occurrences are on privately owned land, the fourth is located in the George Washington National Forest.

Prior to 1988, Scirpus ancistrochaetus had not been found in Maryland or West Virginia. Using aerial photographs to identify potentially suitable habitat, all potential habitat in Maryland and approximatley ninety percent of the potential habitat in West Virginia was surveyed. Three occurrences were discovered, two in West Virginia and one in Maryland. These populations are found relatively close together in the Appalachian Mountains. West Virginia's two extant occurrences are located in Berkeley County, both on privately owned land. They are found in shallow, centripally-drained sinkholes perched atop flat ridges and are part of wetland complexes containing three or more ponds. One site consists of two ponds in a cluster of seven, with stands totaling over 1400 stems. The second occurrence has over 400 stems in three discrete patches within one pond (Bartgis 1989). Maryland's occurrence, located in Frederick County, consists of a very small stand of approximately 100 stems. The small, shallow, successional pond is located on private property lying within

the acquisition boundary of a State Wildlife Management Area (Bartgis 1989).

All but one of the historical S. ancistrochaetus sites and much of the potential habitat in Pennsylvania have been surveyed for S. ancistrochaetus. The two occurrences in Lackawanna and Clinton Counties, Pennsylvania are still recorded as "extant", although three years of surveys have been unable to reconfirm the plants' presence. The Lackawanna County site, a bog lying between sandstone ridges on private land, had one plant in 1985 and was severely burned in 1988. The Clinton County site, lying within the Bald Eagle State Forest, was reported to have had two plants in 1985.

Most of the potential habitat for Scirpus ancistrochaetus has been surveyed in Massachusetts; no new sites have been discovered, though one historical site was confirmed extant in 1989. The extant occurrence of four plants in Franklin County, Massachusetts is found in a shallow, bowl-shaped depression, which is part of a privately owned wetland complex. The depression is inundated with water during periods of ample rainfall and dries out during droughts (Rawinski 1990).

The two Vermont occurrences are both located in Windham County. One is an emergent marsh in an alluvial meadow of the Connecticut River. Sixtynine plants were observed in 1985; 10 plants were observed in 1989. Currently, The Nature Conservancy holds a management agreement with the landowner. The second site, also located on privately owned land, is part of a wetland complex consisting of natural depressions and abondoned beaver ponds. In 1985, 12 plants were observed. while no plants were observed in 1989 (Thompson 1989). At both sites the plants grow at the edge of the emergent zone, adjacent to open water. All suitable habitat within the Connecticut River drainage in Vermont was surveyed; no new occurrences of Scirpus ancistrochaetus were found.

Five historical collections of Scirpus ancistrochaetus are known from New York (Washington County) and Pennsylvania (Blair, Lehigh, Monroe and Northampton Counties). The Nature Conservancy and Natural Heritage Program botanists undertook extensive surveys of these states in 1989, including all historical occurences and a significant portion of the suitable habitat. Surveys have not relocated the presence of S. ancistrochaetus at any of the historical occurences in New York and Pennsylvania.

Scirpus ancistrochaetus and its habitat are highly vulnerable to destruction and disturbance. The majority of the occurrences are found in wetlands that currently have little State or Federal protection. Of the 12 existing populations, two are located on Federal lands and one population is located on State land. The remaining populations situated on private lands are subject to obliteration or degradation through filling and dredging activities for development, agriculture and recreation purposes. Other adverse impacts to the species can occur through direct physical damage to the plants by recreational vehicles or through water quality degradation from non-point source pollution.

There is little available information on the life history of this species. It is not known how the water regime affects Scirpus ancistrochaetus and what specific ecological factors are required for the establishment of new populations. Extremely high water levels may be responsible for the lack of reproduction in a given year, while drier conditions may be conducive to good reproductive output (Rawinski, pers. comm., 1990). There is no data on the impact of fire on Scirpus ancistrochaetus. The site of one extant population was completely burned in 1988 and subsequently, plants have not been observed.

Federal government action on this plant began as a result of section 12 of the Act, which directed the Secretary of the Smithsonian Institution to prepare a report on the plants considered to be endangered, threatened or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975 and subsequently published (Ayensu and DeFilipps 1978). Scirpus ancistrochaetus was listed as "endangered" in that document. On July 1, 1975, the Service published a notice in the Federal Register (40 FR 27823) of its acceptance of the Smithsonian report as a petition within the context of section 4(c)(2) of the Act (now section 4(b)(3)) and of its intention to review the status of plant taxa named within. On June 16, 1976, the Service published a proposed rule in the Federal Register (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered or threatened pursuant to section 4 of the Act. The list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975 Federal Register publication. Scirpus ancistrochaetus was included in the July 1, 1975 notice of review and the

June 16, 1976 proposal. General comments received in relation to the 1976 proposal were summarized in the Federal Register on April 26, 1978 (FR 17909). On December 10, 1979, the Service published a notice (44 FR 70796) withdrawing the portion of the June 16, 1976 proposal that had not been made final, along with four other proposals that had expired due to a procedural requirement of the 1978 Amendments to the Act. On December 15, 1980 (45 FR 82479) the Service published a revised notice of review for native plants in the Federal Register. In this publication, Scirpus ancistrochaetus was identified as a Category 2 candidate (a taxon for which listing is possibly appropriate though existing information is not presently available to support a proposed rule). The species was also designated a Category 2 species in the September 27, 1985 (50 FR 29526) and the February 21, 1990 (50 FR 6184) updated notices of review.

The Endangered Species Act Amendments of 1982 required that all petitions pending as of October 13, 1982 be treated as having been newly submitted on that date. The deadline for a finding on those species, including Scirpus ancistrochaetus was October 13, 1983, Each October, 1983 through 1989, the Service found that the petitioned listing of Scirpus ancistrochaetus was warranted pending finding of further biological information but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Such a finding requires that the petition be recycled. pursuant to section 4(b)(3)(C)(i) of the Act. This proposal to classify Scirpus ancistrochaetus as endangered constitutes the final required petition finding.

On April 7, 1988, the Service received a second petition, submitted by the Vermont Natural Heritage Program, requesting that Scirpus ancistrochaetus be federally listed. In accordance with its established policy, the Service treated this second petition as a public comment to be considered in evaluating the original listing petition. Additional information about the status and threats to S. ancistrochaetus provided by this petition, resulted in the Service's decision to raise the species' priority for listing.

Upon the evaluation of the most recent and comprehensive status survey work (Rawinski 1990), the Service has determined that *Scirpus ancistrochaetus* warrants listing as an endangered species.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (18 U.S.C. et seq.) and regulations promulgated to implement the listing provisions of the Act (50 CFR part 424) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to Scirpus ancistrochaetus Schuyler (Northeastern bulrush) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Nine of the twelve extant populations occur on private lands. Residential development activities, particularly at the southern portion of its range, are responsible for extensive destruction and modification of Scirpus ancistrochaetus habitat. During the 1989 status survey in Virginia, nine of twenty-one ponds believed to be suitable habitat for S. ancistrochaetus were found to be degraded from fill, partial excavation, and eutrophication due to non-point source discharges, or were destroyed by total excavation and diking activities (Rawinski 1990). The two extant populations in West Virginia are also located in areas of increasing residential development and may suffer degradation or destruction if not protected. Both occurrences are surrounded by subdivided lands currently being marketed for housing developments. Four of eight historical sites in eastern Pennsylvania have been destroyed or degraded, primarily by agricultural activities. Construction or agricultural activities occurring near populations may indirectly impact the habitat unless specific measures to prevent or minimize siltation or contamination are implemented. Sedimentation of the wetlands. discharages of herbicides or fertilizers. and alteration of the hydrological regime of Scirpus wetlands are actions which can alter the physical and biological makeup of the habitat, creating an unsuitable environment for the continued existence of the species.

During droughts, the wetlands in which the populations are found dry out, allowing vehicular access to the habitat. Use of off-road and all terrain vehicles may result in the degradation of the habitat through soil compaction, destruction of vegetation, and the direct loss of plants. Heavy off-road vehicle use was observed at one Scirpus ancistrochaetus site in West Virginia

during a dry period in 1989, but actual destruction of this species was not observed.

B. Overutilization for commercial. recreational, scientific or educational purposes. Taking of the species for these purposes has not been documented as being a factor in its decline. In the past, scientific collections have been inadvertent. Relatively few specimens have been collected in recent years. However, future collections could seriously threaten populations, especially at those sites consisting of only a few plants or occupying a very

C. Disease or predation. Disease and predation have not been documented as factors in the decline of this species.

D. The inadequacy of existing regulatory mechanism. In Virginia, Scirpus ancistrochaetus is listed as endangered and is protected under the **Endangered Plant and Insect Species** Act of Virginia (1979, c. 372). This law prohibits taking without permits, except by private landowners. Virginia law also gives the Department of Agriculture and Consumer Services the authority to regulate the sale and movement of listed plants and to establish programs for the management of listed plants.

Scirpus ancistrochaetus receives protection in Pennsylvania as an endangered species under the regulations of the Wild Resources Conservation Act (25 Pa. Code, Chapter 82). Permits are required to collect, remove, or transplant wild plants. classified as threatened or endangered, though landowners are exempt from these requirements. Pennsylvania regulations also provide for the establishment of native wild plant sanctuaries on private lands where there is a management agreement between the landowner and the State Department of Environmental Resources.

Under the Vermont Endangered Species Law (10 V.S.A. Chapter 123), Scirpus ancistrochaetus is listed as threatened and is afforded protection from taking, possession or transport by any person, unless exempted, or by certificate or permit. Permits may be granted for scientific purposes. enhancement of survival of the species, economic hardship, educational purposes or special purposes consistent with the purposes of the Federal Endangered Species Act.

Maryland is in the process of designating Scirpus ancistrochaetus as endangered, though no additional protection will be afforded the plant. Currently, there is no State endangered species legislation in Massachusetts or West Virginia. New York has a law

protecting State listed plants, but has not listed Scirpus ancistrochaetus since there are no extant populations.

Though half of the states with extant Scirpus ancistrochaetus populations have legislation protecting endangered plants from taking or transport, no protection is afforded the habitat. The primary threat to S. ancistrochaetus is from habitat degradation.

Under current Federal regulations, a Department of the Army permit is required for the discharge of dredged or fill material into waters of the United States including adjacent and isolated wetlands where the majority of S. ancistrochaetus occurrences are situated. However, Nationwide Permit 26 exempts wetland fills smaller than 10 acres from the individual permit process provided they are (a) located above headwaters (5 cfs or less) and (b) not part of a surface tributary system to interstate waters or navigable waters. Deposit of up to one acre of dredge or fill material in such wetlands does not require the prior notification of the Army Corps of Engineers. Without federal listing of the species, the 404 regulatory process does not protect S. ancistrochaetus or its habitat.

E. Other natural or manmade factors affecting its continued existence. Six of the 12 known occurrences of S. ancistrochaetus contain fewer than 25 plants. These isolated and critically small populations are highly vulnerable to extinction. Extreme isolation, whether by geographic distance, ecological factors or reproductive strategy. prevents the influx of new genetic material and can result in a highly inbred population with low viability and/or fecundity (Chesser 1983). In addition, current knowledge of the species biology and population dynamics is insufficient to assess whether S. ancistrochaetus is likely to persist following natural events such as drought, flooding and fire.

The Service has carefully assessed the best scientific information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list Scirpus ancistrochaetus as endangered. Only twelve occurrences are known, and plants were not found at three of these sites during the most recent status survey (Rawin'ski 1990) Due to the small number of populations and the continuing threats to its habitat. the plant is in need of protection if it is to survive. These factors support listing as an endangered species. Critical habitat is not being designated for reasons discussed in the following section.

Critical Habitat

Section 4(a)(3) of the Act, as amended. requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for Scirpus ancistrochaetus at this time. Most populations of this species are small to moderate in size, are widely scattered throughout its range and are located on private property, for which there is no regulation to prevent taking by the landowner or others. While collecting for scientific and educational purposes has not contributed to the decline of the species, taking due to vandalism or private collections could eliminate some populations if their locations are publicized. Publication of critical habitat descriptions and maps in the Federal Register could increase these threats to the survival of the species, overriding any protection that such designation might provide.

Designation of critical habitat primarily affects Federal agencies. Since the majority of the occurrences are on privately owned land, critical habitat designation will have little impact on the management or protection of this species. The designation of critical habitat would not provide additional benefits to populations that do not already accrue from listing through section 7 consultation and the recovery process. The Service will coordinate with the U.S. Army Corps of Engineers by providing locational information on S. ancistrochaetus in an effort to prevent destruction of existing sites under Nationwide Permit 26 activities. The U.S. Forest Service has been notified of the presence of Scirpus ancistrochaetus on its properties and of the section 7 requirements. The population located on State property is managed and protected by the State landowning agency.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition. recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State. and private agencies, groups, and individuals. Though Scirpus ancistrochaetus is not currently listed as endangered in New York State, Federal

listing will result in the species being listed as a Protected Native Plant in New York. This action will provide additional protection from collection or destruction. The Nature Conservancy is currently working to protect the known populations and listing will enhance. these efforts. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Because Scirpus ancistrochaetus is a wetland plant, activities which involve filling of these wetlands (including filling authorized under Nationwide 26) would be regulated by the U.S. Army Corps of Engineers and would require section 7 consultation. The Service is not presently aware of any specific proposed projects that might affect known populations of Scirpus ancistrochaetus.

Listing Scirpus ancistrochaetus will encourage research on critical aspects of its life history, ecology and population biology. Information is needed regarding the relationship of fertile culm production to the hydrologic regime of its habitat, reproduction strategies and population recruitment. These factors will be important for the development of recovery strategies and long-term management considerations for individual populations.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62

and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. In addition, for endangered plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the reemoval, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any State law or regulation, including State criminal trespass law. Certain exceptions apply to agents of the Service and state conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. It is anticipated that few trade permits would ever be sought or issued because the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, Rm 432, 4401 N Fairfax Dr., Arlington VA 22203-3507 (703/358-2104).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to Scirpus ancistrochaetus;
- (2) The location of any additional populations of Scirpus ancistrochaetus and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
- (3) Additional information concerning the range, distribution, and population size of *Scirpus ancistrochaetus*; and

(4) Current or planned activities in the subject area and their possible impacts on Scirpus ancistrochaetus.

Final promulgation of the regulation on Scirpus ancistrochaetus will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 25 days of the date of publication of the proposal. Such requests must be made in writing and addressed to Field Supervisor, New England Field Office, U.S. Fish and Wildlife Service (See ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

Ayensu, R.E., and R.A. DeFilipps. 1978. Endangered and threatened plants of the United States. Smithsonian Institution and World Wildlife Fund. 403 pp.

Bartgis, R. 1989. Status survey summary: Scirpus ancistrochaetus in Maryland and West Virignia. Unpub. rept. Maryland Natural Heritage Program, Maryland Department of Natural Resources. 8 pp.

Chesser, R.K. 1983. Isolation by distance: relationship to the management of genetic resources. pp. 66-77 in C. Schonewald-Cox, S.M. Chambers, B. MacBryde and L. Thomas (eds.), Genetics and Conservation: A Reference for Managing Wild Animal and Plant Populations. The Benjamin/Cummings Pub. Co., Inc.

Crow, G.E. 1982. New England's Rare and Endangered Vascular Plants. U.S. Dept. of the Interior. Fish and Wildlife Service, Northeast Region. Washington, DC 130 pp.

Kartesz, J.T., and R. Kartesz. 1980. Asynonimized checklist of the vascular flora of the United States, Canada and Greenland. Volume II. The Biota of North America. University of North Carolina Press, Chapel Hill. 498 pp.

Rawinski, T. 1990. Final status survey report: distribution and abundance of Northeastern bulrush (Scirpus ancistrochaetus). Unpub. rept. Eastern Heritage Task Force, The Nature Conservancy. 5 pp.

Schuyler, A.E. 1962. A new species of Scirpus in the northeastern United States. Rhodora 64: 43-49. Schuyler, A.E. 1964. Notes on five species of Scirpus in eastern North America. Bartonia No. 33: 1–6.

Schuyler, A.E. 1967. A taxonomic revision of North American leafy species of *Scirpus*. Proc. of the Acad. of Nat. Sci. of Phil. Vol. 119: 295–323.

Thompson, L. 1990. Vermont status report: Scirpus ancistrochaetus. Unpub. rept. 14 pp.

Author

The primary author of this proposed rule is Susanna L. von Oettingen (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife. Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below: 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat 3500; unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under the family Cyperaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

(h) · · ·

Species					Mintario Conno			04-4	18/han lintad	Critical	Special
Scientific name	Common name			Historic Range		·····	Status	When listed	habitat	rules	
Cyperaceae—Sedge family			•			•			•		
Scirpus Ancistrochaetus	****	Northeastern buirush.	(=Barbed	bristle)	U.S.A. (MA	A, MD, NY, PA, VA	L, VT, E	•	,	NA	NA

Dated: October 15, 1990.
Bruce Blanchard,

Acting Director, Fish and Wildlife Service.

[FR Doc. 90–26355 Filed 11–7–90; 8:45 am] BILLING CODE 43:0-55-M